

AMENDMENTS TO THE CLAIMS

1-124. (Cancelled).

125. (Previously Presented) A method of comparing at least one chromosome or part thereof from a cell with a first karyotype with the corresponding chromosome or part thereof from a cell with a second karyotype, the method including the steps of:

randomly amplifying DNA from an isolated chromosome or part of an isolated chromosome;

(a) randomly amplifying DNA from an isolated chromosome or part of an isolated chromosome, the amplified DNA being depleted of repetitive sequences and/or sequences that are over represented due to the random amplification;

(b) attaching the amplified DNA to a solid substrate;

(c) amplifying DNA from one or more cells with a first karyotype and amplifying DNA from one or more cells with a second karyotype;

(d) labelling the amplified DNA from the one or more cells with a first karyotype with a first label, and labelling the amplified DNA from the one or more cells with a second karyotype with a second label, wherein the first and second labels are detectably different;

(e) hybridizing the amplified and labelled DNA from the one or more cells with a first karyotype to the amplified DNA attached to the solid substrate, and hybridizing the amplified and labelled DNA from the one or more cells with a second karyotype to the amplified DNA attached to the solid substrate; and

(f) comparing the relative amount of first and second labels hybridized to the amplified DNA attached to the solid substrate.

126. (Previously Presented) The method of claim 125, wherein the part of an isolated chromosome is a cloned fragment of a chromosome.

127. (Previously Presented) The method of claim 125 or 126, wherein the repetitive sequences include one or more repetitive sequences selected from the group consisting of: Cot-1 sequences, simple repeated DNA, satellite repeats, mini-satellite repeats, chromosome-specific repeats, micro-satellite repeats, repeated genes, sequences derived from transposable elements, elements derived from multiple copies of viruses such as retroviruses, repeats associated with centromeres or telomeres, and repeats associated with heterochromatin.

128. (Previously Presented) The method of claim 125, wherein the amplifying of DNA from one or more cells with a first karyotype and the amplifying of DNA from one or more cells with a second karyotype is randomly primed amplification.

129. (Previously Presented) The method of claim 125, wherein the amplified DNA from one or more cells with a first karyotype is DNA amplified from 1 to 20 cells.

130. (Previously Presented) The method of claim 125, wherein the one or more cells with a first karyotype is an embryonic cell, a foetal cell, a germ cell, a cancerous cell, or a polar body.

131. (Previously Presented) The method of claim 125, wherein the method is used to detect a chromosomal abnormality in a cell, for the pre-implantation diagnosis of an embryo or an oocyte, for the prenatal diagnosis of a foetus for a chromosomal abnormality, or for the determination of karyotype of a cancerous cell.

132. (Previously Presented) The method of claim 131, wherein the chromosomal abnormality is selected from the group consisting of an extra or missing individual chromosome, an extra or missing portion of a chromosome, a chromosomal break, a chromosomal rearrangement, a translocation, a dicentric chromosome, an inversion, an insertion, an amplification of a chromosomal region, a deletion, and a point mutation.

133-147. (Canceled).

148. (Previously Presented) The method of claim 125, wherein the amplifying DNA from one or more cells with a first karyotype and amplifying DNA from one or more cells with a second karyotype includes randomly amplifying DNA from 100 or less cells with a first karyotype and randomly amplifying DNA from one or more cells with a second karyotype.

149. (New) The method of claim 125, wherein the amplifying DNA from one or more cells with a first karyotype and amplifying DNA from one or more cells with a second karyotype includes randomly amplifying DNA from a single cell with a first karyotype and randomly amplifying DNA from one or more cells with a second karyotype.